

Abstract

A shaped diaphragm as a part of a fluid processing disposable set acting as a centrifuge system rotor. The fluid processing disposable set has a variable-volume chamber and a fluid port. The shaped diaphragm defines a wall of the variable-volume chamber. The chamber is in fluid communication with the fluid port and is defined by a fixed wall and an elastic wall. The elastic wall is formed by the shaped diaphragm. The disposable set may also have a rotary seal coupled to the fluid port and fluidly coupled to the variable-volume chamber. The shaped diaphragm may be convoluted. The convolution may be a single fold and may have a plurality of folds located symmetrically about an axis. The shaped diaphragm may, alternatively, be essentially planar in an unstretched position while varying in thickness along a diaphragm dimension. Centrifuge rotors, systems, and methods for selective harvest of fluid constituents from a whole fluid are detailed.

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